

CLAIMS

1. An alloy endowed with high-temperature mechanical strength in an oxidizing medium, said alloy being free of molybdenum and/or tungsten and comprising a chromium-containing matrix strengthened by precipitation of carbides, characterized in that it comprises carbides of at least one metal (M) chosen from titanium, zirconium and hafnium, said carbides optionally further containing tantalum (M').

2. The alloy as claimed in claim 1, characterized in that it comprises a matrix based on cobalt or nickel or iron-nickel.

3. The alloy as claimed in claim 1 or 2, characterized in that it comprises at least 0.2%, especially at least 0.6%, carbon by weight.

4. The alloy as claimed in one of the preceding claims, characterized in that it comprises the metal M, and optionally M', in a metal/carbon molar ratio (M + M')/C of around 0.9 to 2, in particular 0.9 to 1.5.

5. The alloy as claimed in one of the preceding claims, characterized in that it is essentially composed of the following elements (the proportions being indicated in percentages by weight of the alloy):

Cr	23 to 34%
Ni	6 to 12%
M = Zr, Hf or Ti	0.2 to 7%
M' = Ta	0 to 7%
C	0.2 to 1.2%
Fe	less than 3%
Si	less than 1%
Mn	less than 0.5%,

the balance consisting of cobalt and inevitable impurities.

6. The alloy as claimed in one of the preceding  
5 claims, characterized in that it comprises 0.2 to 5%,  
preferably around 0.4 to 5%, titanium by weight.

7. The alloy as claimed in one of the preceding  
claims, characterized in that it comprises 0.2 to 5%,  
10 preferably around 0.4 to 3%, zirconium by weight.

8. The alloy as claimed in one of the preceding  
claims, characterized in that it comprises 0.2 to 7%,  
preferably around 0.4 to 5%, hafnium by weight.

15 9. The alloy as claimed in claim 8, characterized in  
that the Hf/C ratio is less than 1.

10. The alloy as claimed in one of the preceding  
20 claims, characterized in that the tantalum content is  
around 1 to 7%, in particular around 2 to 6%.

11. An article, especially an article that can be used  
in particular for the hot smelting or conversion of  
25 glass, made of an alloy as claimed in any one of claims  
1 to 10, especially by casting.

12. The article as claimed in claim 11 that has  
undergone a forging operation after the alloy has been  
30 cast.

13. The article as claimed in either of claims 11 and  
12, which consists of a fiberizing spinner for the  
manufacture of mineral wool.

35 14. A process for manufacturing an article as claimed  
in claims 11 to 13, comprising the casting of the  
molten alloy in a suitable mold.

15. A process for manufacturing mineral wool by internal centrifugation, in which a stream of molten mineral material is poured into a fiberizing spinner, the peripheral band of which is pierced by a multitude  
5 of orifices via which filaments of molten mineral material escape that are then attenuated through the action of a gas into wool, characterized in that the temperature of the mineral material in the spinner is at least 1200°C and in that the fiberizing spinner is  
10 made of a cobalt-based alloy as claimed in one of claims 1 to 10.

16. The process as claimed in claim 15, characterized in that the molten mineral material has a liquidus  
15 temperature of around 1130°C or higher, especially 1170°C or higher.